



DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO

GOVERNOR

MIKE D. McDANIEL, Ph.D.

SECRETARY

Certified Mail No.

Agency Interest No..288
Activity No.: PER20060004

Mr. Kelly B. Serio
Vice President/Plant Manager
Formosa Plastics Corporation
PO Box 271
Baton Rouge, LA 70821-0271

RE: Prevention of Significant Deterioration (PSD) Permit, PSD-LA-560 (M-3), Formosa
Plastics Corp Louisiana - Baton Rouge Plant, Formosa Plastics Corp LA, Baton Rouge,
East Baton Rouge Parish, Louisiana

Enclosed is your permit, PSD-LA-560 (M-3). Operation of the of the proposed project is not
allowed until such time as the corresponding operating permit is issued.

Should you have any questions concerning the permit, contact Ms. Cathy E. Thompson at 225-219-
0034.

Chuck Carr Brown, Ph.D.
Assistant Secretary

Date

CCB:cet
c: EPA Region VI

ENVIRONMENTAL SERVICES

: PO BOX 4313, BATON ROUGE, LA 70821-4313

P:225-219-3181 F:225-219-3309

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PUBLIC NOTICE
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)
FORMOSA PLASTICS CORPORATION-LOUISIANA
BATON ROUGE NORTH WORKS-UTILITY UNIT
PROPOSED INITIAL PART 70 AIR OPERATING PERMIT
AND PREVENTION OF SIGNIFICANT DETERIORATION (PSD) MODIFICATION

The LDEQ, Office of Environmental Services, is accepting written comments on a proposed initial Part 70 air operating permit and PSD modification for Formosa Plastics Corporation LA (FPC-LA), Baton Rouge North Works, P.O. Box 271, Baton Rouge, LA 70821-0271 for the Utility Unit. **The facility is located on the north end of Gulf States Road, Baton Rouge, East Baton Rouge Parish.**

Formosa Plastics Corporation LA is an existing synthetic organic chemical manufacturing industry facility. The FPC-LA operates under State Permit No. 0840-00002-10 issued March 7, 1997 and PSD-LA560 (M-1) issued March 2, 1995.

FPC-LA requested incorporation of the following changes in the initial Part 70 air operating permit:

1. Install two new package boilers (350 MMBTU/hour) to meet plant steam requirements allowing one of the gas turbines to be idled. These two new boilers will not be operated simultaneously.
2. Modify the anticipated emissions associated with existing Package Boiler A to show increased use of this boiler for plant operations.
3. Incorporate all major combustion sources (three cogeneration units, existing Package Boiler A, existing Package Boilers B and C, and the new package boilers) under a single emissions cap (Combustion Cap). Package Boilers B and C will be permanently shut down when the new package boilers are brought on line.
4. Include requirements approved under the Alternative Monitoring Plan (Revision 1) for NO_x RACT in the Part 70 air operating permit. The Alternative Monitoring Plan details monitoring requirements and emission levels allowed for NO_x and CO in the Baton Rouge Non-attainment Area during the ozone season.
5. Update previously specified emission rates using a more conservative evaluation of emission factors obtained from stack tests, vendor data, and currently published AP-42 emission factors.

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Before¹</u>	<u>After²</u>	<u>Change³</u>
PM ₁₀	9.80	39.38	+29.58
SO ₂	5.00	22.69	+17.69
NO _x	643.30	642.74	-0.56
CO	314.10	350.65	+36.55
VOC*	9.02	35.53	+26.51
*Toxic VOC Compounds	NS	11.17	+11.17
Non-toxic VOC Compounds	NS	3.42	+3.42

¹The before emissions represent pollutant emissions that were existing and not previously speciated/accounted for.

²The after emissions are based upon pollutant emissions that are more conservative evaluation of emission factors obtained from vendor data, stack test data, or regulatory data and the addition of the proposed new boilers.

³ Netting analysis, as a result of installing the new boilers, indicate that emissions are below NSR thresholds for all pollutants.

*The Utility Unit is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51. However, until the administrative authority makes a final determination, toxic air pollutant emissions from the combustion of Group 1 and Group 2 virgin fossil fuels are exempt from the requirements of Chapter 51.

Additionally FPC-LA is requesting a modification of an existing PSD permit. PSD-LA-560 (M-3) updates the requirements included in PSD-LA-560 (M-2). This permit includes the removal of permanently shut down emission sources and updates the specific conditions. PSD-LA-560 (M-3) supersedes the previous PSD permits, including PSD-LA-560, PSD-LA-560 (M-1) and PSD-LA-560 (M-2).

Written comments, written requests for a public hearing, or written requests for notification of the final decision regarding this permit action may be submitted to Ms. Soumaya Ghosn at LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. **Written comments and/or written requests must be received by 12:30 p.m., Tuesday, May 30, 2006.** Written comments will be considered prior to a final permit decision.

If LDEQ finds a significant degree of public interest, a public hearing will be held. LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The permit applications, proposed initial Part 70 air operating permit, proposed PSD permit modification, and statement of basis are available for review at the LDEQ, Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). An additional copy may be reviewed at the East Baton Rouge Parish Library, Scotlandville Branch, located at 7373 Scenic Highway, Baton Rouge, LA 70807.

Inquiries or requests for additional information regarding this permit action should be directed to Ms. Cathy E. Thompson, LDEQ, Air Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-0034.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at maillistrequest@ldeq.org or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

Permit public notices including electronic access to the proposed permits and statement of basis can be viewed at the LDEQ permits public notice webpage at www.deq.state.la.us/news/PubNotice/ and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx.

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at http://www.state.la.us/ldbc/listservpage/ldeq_pn_listserv.htm.

All correspondence should specify AI Number 288:

**Permit Number 2915-V0, and Activity Number PER20040010 for the Part 70 air operating permit
Permit Number PSD-LA-(560 M-3), Activity Number PER20060004 for the PSD permit.**

Publication Date: April 25, 2006

PROPOSED BRIEFING SHEET

Formosa Plastics Corporation Louisiana
Agency Interest No.: 288
Utility Unit
Baton Rouge, East Baton Rouge Parish, Louisiana
PSD-LA-560 (M-3)

PURPOSE

Formosa Plastics Corporation (FPC) requests that existing PSD Permit No. PSD-LA-560 (M-2) be updated to incorporate removal of permanently shut down emission sources and updated specific condition language. PSD-LA-560 (M-2), issued on March 7, 1997, allowed for operation of a third combined-cycle gas turbine (Cogeneration Unit No. 3, Source ID 212). PSD-LA-560 (M-3) incorporates and updates the requirements of PSD-LA-560 (M-2), as applicable. PSD-LA-560 (M-3) supercedes previous PSD permits, including PSD-LA-560, PSD-LA-560 (M-1) and PSD-LA-560 (M-2).

RECOMMENDATION

Approval of the proposed changes incorporated into PSD-LA-560 (M-3) as detailed in the project description.

REVIEWING AGENCY

Louisiana Department of Environmental Quality, Office of Environmental Services, Air Permits Division.

PROJECT DESCRIPTION

PSD-LA-560 (M-3) updates the requirements included in PSD-LA-560 (M-2). This permit includes the removal of permanently shut down emission sources and updates the specific conditions. PSD-LA-560 (M-3) supercedes the previous PSD permits, including PSD-LA-560, PSD-LA-560 (M-1) and PSD-LA-560 (M-2).

In PSD-LA-560 (M-2), emission rates were included in Specific Condition No. 1 for the Oxychlorination Vent, Incinerator No. 1, Incinerator No. 2, South VCM Cracking Furnace, and North VCM Cracking Furnace (Source ID 115, 165, 176, 169, and 174, respectively). These sources were permanently shutdown with the shutdown of the Caustic Chlorine (CCN) Unit and VCM 1 Unit. Therefore, these sources have been removed from the PSD permit.

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Additionally, Specific Condition No. 1 included both annual and maximum hourly emission limits for each source. Since the emissions for Utility Unit combustion sources are included in Title V Permit No. 2915-V0 as a Utility Unit Emissions Cap (Source ID Utility Cap) and individual annual emissions limits for Cogeneration Unit No. 1, Cogeneration Unit No. 2, and Cogeneration Unit No. 3 (Source ID 166, 167, and 212, respectively) have not been established, Specific Condition No. 1 was updated to remove the individual emissions limits for these sources.

Since Specific Conditions No. 2, 4, and 6 in PSD-LA-560 (M-2) have been previously completed, language has been added to these conditions clarifying that the requirements have been met. Additionally, it is requested that Specific Condition No. 5 in PSD-LA-560 (M-2) be removed from the permit since this requirement does not apply to the Cogeneration Unit No. 3 duct burner in accordance with 40 CFR 60 Subpart Db and EPA determinations.

PSD-LA-560 (M-2) is incorporated into this permit except as noted herein. The operation of Cogeneration Unit No. 3 (Source ID 212) was permitted in PSD-LA-560 (M-2). Emissions increases due to the previously permitted project in PSD-LA-560 (M-2) were significant for nitrogen oxides (NO_x) and carbon monoxide (CO) and required Prevention of Significant Deterioration review. Estimated net emissions for the operation of Cogeneration Unit No. 3, as permitted in PSD-LA-560 (M-2), in tons per year are as follows:

<u>Pollutant</u>	<u>Increase due To Project</u>	<u>PSD de Minimis</u>
PM ₁₀	6.07	15
SO ₂	1.58	40
NO _x	429.23	40
CO	125.02	100
VOC	6.43	40

TYPE OF REVIEW

PSD-LA-560 (M-3) does not include a proposed construction project. This permit incorporates removal of permanently shut down sources and updated specific condition language. The requested changes were reviewed prior to permit issuance.

Prior to issuance of existing PSD-LA-560 (M-2), the NO_x and CO emission rates were reviewed in accordance with PSD regulations since the emission rates were above the PSD significance levels for the operation of Cogeneration Unit No. 3. It was determined that control of NO_x emissions from the

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new turbine to a level of 9 ppm meets the requirements of lowest achievable emission rate (LAER) technology and best available control technology (BACT). Because of the inverse relationship between carbon monoxide emissions and NO_x emissions in the normal combustion range, no additional controls was determined to be BACT for CO emissions.

BEST AVAILABLE CONTROL TECHNOLOGY

The proposed changes requested for PSD-LA-560 (M-3) do not include modification of existing equipment and do not require a BACT analysis.

The operation of Cogeneration Unit No. 3 (Source ID 212), as permitted in PSD-LA-560 (M-2), required a BACT analysis. In PSD-LA-560 (M-2), control of NO_x emissions from the new turbine to a level of 9 ppm was determined to meet the requirements of LAER technology and BACT. Because of the inverse relationship between CO emissions and NO_x emissions in the normal combustion range, no additional controls were determined to be BACT for CO emissions.

AIR QUALITY IMPACT ANALYSIS

Prevention of Significant Deterioration (PSD) regulations require an analysis of existing air quality for those pollutants emitted in significant amounts from a proposed modification or new facility. The proposed changes incorporated into PSD-LA-560 (M-3) do not include modifications to existing equipment. There are no significant increases in emissions resulting from the proposed changes in PSD-LA-560 (M-3); therefore, an analysis of the air quality impact due to changes is not required.

Prior to issuance of PSD-LA-560 (M-2), screening dispersion modeling was conducted for CO and NO_x for the proposed operation of Cogeneration Unit No. 3 (Source ID 212). The screening dispersion modeling indicated maximum ground level concentrations of CO were below the preconstruction monitoring exemption levels and the ambient significance levels. No preconstruction monitoring or increment analysis or refined modeling was required for CO.

As a result of the permitted project included in PSD-LA-560 (M-2), ambient concentrations of NO_x predicted by screening modeling were above the preconstruction monitoring exemption level of 14 ug/m³. Background NO_x levels, based on data from the existing State monitoring site and modeled receptors of the site, were calculated to be 20 ug/m³ for the annual period. Dispersion modeling indicated the impact of NO_x was below the National Ambient Air Quality Standards (NAAQS) and within the allowable increment consumption limits of this pollutant.

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Baton Rouge, East Baton Rouge Parish, Louisiana
PSD-LA-560 (M-3)

ADDITIONAL IMPACTS

Soils, vegetation, and visibility will not be adversely impacted by the requested changes incorporated into PSD-LA-560 (M-3), nor will any Class I area be affected. These proposed changes will not result in any significant secondary growth effects.

As permitted in PSD-LA-560 (M-2), soils, vegetation, and visibility were not adversely impacted by the previously approved and implemented changes in emissions, nor was any Class I area affected. The previously permitted project did not result in any significant secondary growth effects.

PROCESSING TIME

Application Dated:	December 21, 2004
Application Received:	December 21, 2004
Additional Information Dated:	February 4, 2005
	March 17, 2005
	May 18, 2005
	June 30, 2005
	January 30, 2006
	March 28, 2006
	April 7, 2006
Effective Completeness:	April 10, 2006

PUBLIC NOTICE

A notice requesting public comment on the permit was published in The Advocate, Baton Rouge, Louisiana, on Month XX, 2006. The proposed permit was also submitted to US EPA Region VI. All comments will be considered prior to the final permit decision.

**PROPOSED
PRELIMINARY DETERMINATION SUMMARY**

Formosa Plastics Corporation Louisiana
Agency Interest No.: 288
Utility Unit
Baton Rouge, East Baton Rouge Parish, Louisiana
PSD-LA-560 (M-3)

I. APPLICANT

Formosa Plastics Corp LA
PO Box 271
Baton Rouge, LA 708210271

II. LOCATION

Formosa Plastics Corporation Louisiana (FPC) is located at Gulf States Road North, East Baton Rouge Parish, Baton Rouge, Louisiana. The facility is located in a heavy industrial area on the east bank of the Mississippi River. It is bordered on the north, east, and south by other chemical/petrochemical and oil refining facilities. Approximate UTM coordinates are 674.00 kilometers East and 3375.00 kilometers North, Zone 15.

III. PROJECT DESCRIPTION

PSD-LA-560 (M-3) incorporates and updates the requirements included in PSD-LA-560 (M-2). This permit includes the removal of permanently shut down emission sources and updates to specific condition language. PSD-LA-560 (M-3) supercedes the previous PSD permits, including PSD-LA-560, PSD-LA-560 (M-1) and PSD-LA-560 (M-2).

In PSD-LA-560 (M-2), emission rates were included in Specific Condition No. 1 for the Oxychlorination Vent, Incinerator No. 1, Incinerator No. 2, South VCM Cracking Furnace, and North VCM Cracking Furnace (Source ID 115, 165, 176, 169, and 174, respectively). These sources were permanently shutdown with the shutdown of the Caustic Chlorine (CCN) Unit and VCM 1 Unit. Therefore, these sources have been removed from the PSD permit.

Additionally, Specific Condition No. 1 included both annual and maximum hourly emission limits for each source. Since the emissions for Utility Unit combustion sources are included in Title V Permit No. 2915-V0 as a Utility Unit Emissions Cap (Source ID Utilities Cap) and individual annual emissions limits for Cogeneration Unit No. 1, Cogeneration Unit No. 2, and Cogeneration Unit No. 3 (Source ID 166, 167, and 212, respectively) have not been established, Specific Condition No. 1 was updated to remove the individual emissions limits for these sources.

**PROPOSED
PRELIMINARY DETERMINATION SUMMARY**

Formosa Plastics Corporation Louisiana
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Utility Unit
Baton Rouge, East Baton Rouge Parish, Louisiana
PSD-LA-560 (M-3)

Since Specific Conditions No. 2, 4, and 6 in PSD-LA-560 (M-2) have been previously completed, language has been added to these conditions clarifying that the requirements have been met. Additionally, it is requested that Specific Condition No. 5 in PSD-LA-560 (M-2) be removed from the permit since this requirement does not apply to the Cogeneration Unit No. 3 duct burner in accordance with 40 CFR 60 Subpart Db and EPA determinations.

PSD-LA-560 (M-2) is incorporated into this permit except as noted herein. The operation of Cogeneration Unit No. 3 (Source ID 212) was permitted in PSD-LA-560 (M-2). Emissions increases due to the previously permitted project in PSD-LA-560 (M-2) were significant for nitrogen oxides (NO_x) and carbon monoxide (CO) and required Prevention of Significant Deterioration review. Estimated net emissions for the operation of Cogeneration Unit No. 3, as permitted in PSD-LA-560 (M-2), in tons per year are as follows:

<u>Pollutant</u>	<u>Increase due to Project</u>	<u>PSD de Minimis</u>
PM ₁₀	6.07	15
SO ₂	1.58	40
NO _x	429.23	40
CO	125.02	100
VOC	6.43	40

IV. SOURCE IMPACT ANALYSIS

A proposed net increase in the emission rate of a regulated pollutant above de minimis levels for modified major sources requires review under PSD regulations, 40 CFR 52.21. PSD permit reviews of proposed new or modified major stationary sources require the following analyses:

- A. A determination of the Best Available Control Technology (BACT);
- B. Analysis of the existing air quality and a determination of whether or not preconstruction or postconstruction monitoring will be required;
- C. An analysis of the source's impact on total air quality to ensure compliance with the National Ambient Air Quality Standards (NAAQS);
- D. An analysis of the PSD increment consumption;

**PROPOSED
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PSD-LA-560 (M-3)

- E. An analysis of the source related growth impacts;
- F. An analysis of source related impacts on soils, vegetation, and visibility;
- G. A Class I Area impact analysis; and
- H. An analysis of the impact of toxic compound emissions.

A. BEST AVAILABLE CONTROL TECHNOLOGY

Under current PSD regulations, an analysis of "top down" BACT is required for the control of each regulated pollutant emitted from a modified major source in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes.

The proposed changes requested for PSD-LA-560 (M-3) do not include modification of existing equipment and do not require a BACT analysis. The operation of Cogeneration Unit No. 3 (Source ID 212), as permitted in PSD-LA-560 (M-2), was required to meet BACT since the NO_x and CO emissions were above PSD de minimis levels. A BACT analysis was previously conducted for these PSD regulated pollutants as permitted in PSD-LA-560 (M-2) and incorporated into PSD-LA-560 (M-3).

BACT analysis for NO_x

As permitted in PSD-LA-560 (M-2), control of NO_x emissions from the turbine to a level of 9 ppm was determined to meet the requirements of lowest achievable emission rate (LAER) technology and best available control technology (BACT).

**PROPOSED
PRELIMINARY DETERMINATION SUMMARY**

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BACT analysis for CO

As permitted in PSD-LA-560 (M-2), due to the inverse relationship between CO emissions and NO_x emissions in the normal combustion range, no additional controls were determined to be BACT for CO emissions.

B. ANALYSIS OF EXISTING AIR QUALITY

PSD regulations require an analysis of existing air quality for those pollutants emitted in significant amounts resulting from a proposed modification or new facility. The proposed changes incorporated into PSD-LA-560 (M-3) do not include modifications to existing equipment. There are no significant increases in emissions resulting from the proposed changes in PSD-LA-560 (M-3).

In PSD-LA-560 (M-2), nitrogen oxides (NO_x) and carbon monoxide (CO) were addressed due to the proposed operation of Cogeneration Unit No. 3 (Source ID 212). Modeling due to this previously permitted project alone, as discussed below, demonstrated that the maximum impacts of CO resulted in concentrations below the preconstruction monitoring exemption level for the 8-hour averaging time. Screening modeling for NO_x resulted in concentrations above the preconstruction monitoring exemption level of 14 ug/m³, for the annual averaging period. Therefore, Louisiana air monitoring data from the nearest site was utilized for preconstruction monitoring requirements. This National Air Monitoring Station (NAMS) satisfies the requirements outlined in the PSD monitoring guidelines. These concentrations were also well below the NAAQS requirements.

C. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ANALYSIS

The proposed changes included in PSD-LA-560 (M-3) do not require modeling since no projects resulting in modifications to the existing sources are included in PSD-LA-560 (M-3).

Refined modeling was not required for CO emissions as a result of the operation of Cogeneration Unit No. 3 (Source ID 212) permitted in PSD-LA-560 (M-2). Refined modeling for NO_x emissions for this previously permitted project resulted in an annual concentration of 60 ug/m³. When added to the background concentration of 20 ug/m³, it remained below the 100 ug/m³ annual standard.

**PROPOSED
PRELIMINARY DETERMINATION SUMMARY**

Formosa Plastics Corporation Louisiana
Agency Interest No.: 288
Utility Unit
Baton Rouge, East Baton Rouge Parish, Louisiana
PSD-LA-560 (M-3)

D. PSD INCREMENT ANALYSIS

The proposed changes included in PSD-LA-560 (M-3) do not require a PSD increment analysis since there are no projects resulting in modifications to existing equipment included in PSD-LA-560 (M-3).

As permitted in PSD-LA-560 (M-2), no increment was established for CO as a result of the operation of Cogeneration Unit No. 3 (Source ID 212). Modeling for NO_x increment consumption for the previously permitted project indicated an increment expansion. This was due to a general reduction of NO_x in the area inventory since the baseline date.

E. SOURCE RELATED GROWTH IMPACTS

The proposed changes included in PSD-LA-560 (M-3) do not have any related growth impacts; therefore, there are not any significant increases in pollutant emissions indirectly associated with the proposed changes.

The construction and operation of Cogeneration Unit No. 3 (Source ID 212), as permitted in PSD-LA-560 (M-2), did not have any significant effect on residential growth or industrial/commercial development in the area of the facility. No significant net change in employment, population, or housing was associated with the previously permitted project. As a result, there were not any significant increases in pollutant emissions indirectly associated with the previously permitted project.

F. SOILS, VEGETATION, AND VISIBILITY IMPACTS

There will be no significant impact on area soils, vegetation, or visibility.

G. CLASS I AREA IMPACTS

Breton National Wildlife Area, the nearest Class I area, is over 100 kilometers from the site, precluding any significant impact.

**PROPOSED
PRELIMINARY DETERMINATION SUMMARY**

Formosa Plastics Corporation Louisiana
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Utility Unit
Baton Rouge, East Baton Rouge Parish, Louisiana
PSD-LA-560 (M-3)

H. TOXIC IMPACT

The requested changes included in PSD-LA-560 (M-3) do not include any proposed modifications to existing sources. As permitted in PSD-LA-560 (M-2), emissions of toxic air pollutants associated with the combustion of natural gas increased slightly as a result of the operation of Cogeneration Unit No. 3 (Source ID 212). However, combustion of natural gas currently is exempted from LAC 33:III.Chapter 51 requirements under the virgin fossil fuel provisions. The increase in impact was estimated to be insignificant. Technology for the control of NO_x was chosen in part to minimize introduction of additional toxic compounds by the previously permitted operation of Cogeneration Unit No. 3.

V. CONCLUSION

The Air Permits Division has made a preliminary determination to approve the proposed updates to PSD-LA-560 (M-2) for Formosa Plastics Corporation Louisiana, Baton Rouge, East Baton Rouge Parish, Louisiana, subject to the attached specific and general conditions. In the event of a discrepancy in the provisions found in the application and those in this Preliminary Determination Summary, the Preliminary Determination Summary shall prevail.

**PROPOSED DRAFT
SPECIFIC CONDITIONS**

**FORMOSA PLASTICS CORPORATION LOUISIANA
UTILITY UNIT
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
PSD-LA-560 (M-3)**

1. The permittee is authorized to operate in conformity with the specifications submitted to the Louisiana Department of Environmental Quality (LDEQ) and subject to the following emission limitations and other specified conditions. Specifications submitted to LDEQ are contained in the original application dated December 21, 2004, and subsequent updates submitted on February 4, 2005, March 17, 2005, May 18, 2005, June 30, 2005, and January 30 and April 7, 2006.

MAXIMUM ALLOWABLE EMISSIONS RATES				
Emission Point	Description	Operating Rate (Maximum)	CO (lb/hr)	NO _x (lb/hr)
166	Gas Turbine No. 1 HRSG No. 1	450.0 MM BTU/hr 136.5 MM BTU/hr	70	75
167	Gas Turbine No. 2 HRSG No. 2	450.0 MM BTU/hr 136.5 MM BTU/hr	70	75
212	Gas Turbine No. 3 HRSG No. 3	450.0 MM BTU/hr 110 MM BTU/hr	70	75

2. Permittee shall demonstrate compliance with permitted emission limits in PSD-LA-560 (M-2) by performing stack tests using methods found in 40 CFR 60, Appendix A, for the new turbine, Emission Point 212, as follows:
- A) CO by Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources. This requirement was previously completed and the results submitted to LDEQ on December 23, 1996. No additional test(s) are required for this permit.
- B) NO_x by Method 20 - Determination of Nitrogen Oxides, Sulfur Dioxide, and Oxygen Emissions From Stationary Gas Turbines; or other methods suitable to the Air Quality Division Engineering Section. Permittee shall demonstrate compliance with a 9 ppmv NO_x emission limit (on a dry basis corrected to 15% O₂) for the new and modified turbines. This requirement was previously completed and the results submitted to LDEQ on December 23, 1996. No additional test(s) are required for this permit.
3. Permittee shall comply with all applicable provisions of New Source Performance Standards, 40 CFR 60, Subpart Db-Standards of Performance for Industrial-Commercial-Institutional

**PROPOSED DRAFT
SPECIFIC CONDITIONS**

**FORMOSA PLASTICS CORPORATION LOUISIANA
UTILITY UNIT
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
PSD-LA-560 (M-3)**

Steam Generating Units, for the duct burner, Emission Point 212.

4. Permittee shall demonstrate initial compliance with the NO_x emission limits of PSD-LA-560 (M-2) by stack testing the duct burner, Emission Point 212, as specified in New Source Performance Standards, 40 CFR 60, Subpart Db, Section 60.46b(f). This requirement was previously completed and the results submitted to LDEQ on December 23, 1996. No additional test(s) are required for this permit.
5. Permittee shall demonstrate compliance with permitted CO emission limits of PSD-LA-560 (M-2) by stack testing the duct burner, Emission Point 212, using methods found in 40 CFR 60, Appendix A, Method 10-Determination of Carbon Monoxide Emissions From Stationary Sources. This requirement was previously completed and the results submitted to LDEQ on December 23, 1996. No additional test(s) are required for this permit.
6. Permittee shall operate the duct burners, Emission Points 166, 167, and 212, with sweet natural gas only.
7. Permittee shall comply with all applicable provisions of New Source Performance Standards, 40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines, in the operation of the turbines, Emission Points 166, 167, and 212.

**LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS**

- I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.
- II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.
- III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire date August 20, 2000, and a revised application and EIQ dated December 21, 2004, as well as additional information dated February 4, 2005, March 17, 2005, May 18, 2005, June 30, 2005, and January 30, 2006.
- IV. This permit shall become invalid, for the sources not constructed, if:
 - A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;
 - B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.

The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.

This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.
- V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.

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- VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.
- VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.
- VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.
- IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Surveillance Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition 1.
- X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.
- XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Surveillance Division with a written report as specified below.
- A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33:I.Chapter 39.
- B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.

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- C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:
1. Report by June 30 to cover January through March
 2. Report by September 30 to cover April through June
 3. Report by December 31 to cover July through September
 4. Report by March 31 to cover October through December
- D. Each report submitted in accordance with this condition shall contain the following information:
1. Description of noncomplying emission(s);
 2. Cause of noncompliance;
 3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
 4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
 5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.
- E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.
- XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:
- A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;
 - B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;
 - C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and
 - D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.

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- XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.
- XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.
- XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.
- XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services, Air Permits Division, within ninety (90) days after the event, to amend this permit.
- XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:
1. Generally be less than 5 TPY
 2. Be less than the minimum emission rate (MER)
 3. Be scheduled daily, weekly, monthly, etc., or
 4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]
- These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:I.3901.
- XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

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Attention: Office of the Secretary, Legal Services Division
La. Dept. of Environmental Quality
Post Office Box 4302
Baton Rouge, Louisiana 70821-4302

- XIX. Certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

TABLE I: BACT COST SUMMARY

**Formosa Plastics Corporation Louisiana
Agency Interest No.: 288
Utility Unit
Baton Rouge, East Baton Rouge Parish, Louisiana**

Control Alternative for NO _x and CO emissions		Availability / Feasibility	Negative Impacts (a)	Control Efficiency	Emissions Reduction (TPY)	Annualized Cost (\$)	Cost Effectiveness (\$/Ton)	Notes
NO _x	Description of Control	NR ¹	NR ¹	NR ¹	NR ¹	NR ¹	NR ¹	NR ¹
CO	Description of Control	NR ¹	NR ¹	NR ¹	NR ¹	NR ¹	NR ¹	NR ¹
Notes: a) Negative impacts: 1) economic, 2) environmental, 3) energy, 4) safety b) Technically infeasible, economic analysis was not performed								

Since this data was not required for the BACT analysis for operation of Cogeneration Unit No. 3 (Source ID 212) included in PSD-LA-560 (M-2), it is not provided in this permit. A BACT analysis for PSD-LA-560 (M-3) was not required since the proposed changes incorporated into PSD-LA-560 (M-3) did not include modifications to existing sources.

TABLE II
AIR QUALITY ANALYSIS SUMMARY

Formosa Plastics Corporation Louisiana

Agency Interest No.: 288

Utility Unit

Baton Rouge, East Baton Rouge Parish, Louisiana

Pollutant	Averaging Period	Preliminary Screening Conc. ($\mu\text{g}/\text{m}^3$)	Significant Monitoring Conc. ($\mu\text{g}/\text{m}^3$)	Current Monitored Conc. ($\mu\text{g}/\text{m}^3$)	Level of Significant Impact ($\mu\text{g}/\text{m}^3$)	Maximum Modeled Conc. ($\mu\text{g}/\text{m}^3$)	Modeled + Background Conc. ($\mu\text{g}/\text{m}^3$)	National Ambient Air Quality Standard ($\mu\text{g}/\text{m}^3$)	Modeled PSD Increment Consumption ($\mu\text{g}/\text{m}^3$)	Allowable Class II PSD Increment ($\mu\text{g}/\text{m}^3$)
Nitrogen Dioxide ¹	Annual	NR ¹	14	NR ¹	1	NR ¹	NR ¹	100	NR ¹	25
CO ¹	1-hour	NR ¹	-	NR ¹	2000	NR ¹	NR ¹	40,000	NR ¹	-
	8-hour	NR ¹	575	NR ¹	500	NR ¹	NR ¹	10,000	NR ¹	-
NR = Not Required										

¹ This information was not required for PSD-LA-560 (M-3) since the proposed changes incorporated into PSD-LA-560 (M-3) did not include modifications to existing sources.